Ownership matrix

1.0 PURPOSE AND SCOPE

(5.1.1, 5.1.2)

This standard establishes requirements and identifies responsibilities for minimizing the duration and impact of fire protection system discrepancies.

2.0 IMPLEMENTATION

This standard is effective on the date shown in the header.

3.0 STANDARD

Primary responsibility for proper and continuous operation of a fire protection system rests with facility management. Although many of the specific actions in this standard may be carried out by other organizations supporting the facility management (i.e., Hanford Fire Department, Fire Systems Maintenance, Fire Marshal's office, or Tank Farm Contractor (TFC) fire protection engineer), facility management must ensure that these requirements are met.

3.1 Discovery of a Discrepancy

Any TFC employee identifying a fire protection discrepancy must notify facility management immediately and write, or provide the necessary input to the author of, a Problem Evaluation Request (PER) in accordance with TFC-ESHQ-Q_C-C-01.

A discrepancy, identified by an organization outside the TFC (i.e., Hanford Fire Department or Fire Systems Maintenance) must be reported to the shift manager. A work package (corrective action plan) is required to be prepared to address the discrepancy. The TFC fire protection engineer will be notified about the discrepancy and correction of the discrepancy by e-mail, as a minimum. E-mail messages are kept by the Hanford Fire Department.

3.1.1 Facility Management

1. Immediately notifies the shift manager of all fire protection system discrepancies that restrict and/or render any fire alarm or fire suppression system inoperable (i.e., system restriction or emergency impairment).

2. As necessary, briefs the building occupants affected by any fire system discrepancy.

3. For impairments and system restrictions, implements compensatory measures or, as needed, assists the shift manager to implement compensatory measures. A log of compensatory measures must be maintained.

4. Incorporates applicable codes into leases with private firms, as necessary.

3.1.2 Shift Manager

1. Immediately notifies the building manager and the Hanford Fire Department of all fire protection system discrepancies that restrict and/or render any fire alarm of fire suppression system inoperable (i.e., system restriction or emergency impairment).

2. As necessary, briefs the building occupants affected by any fire system discrepancy.

3. For impairments and system restrictions, implements compensatory measures or assists building manager to implement compensatory measures. A log of compensatory measures must be maintained.

3.1.3 TFC Fire Protection Engineer

1. Reviews applicable fire system impairment information and interfaces with the Hanford Fire Department and Fire Systems Maintenance, as necessary, to ensure the correction of the discrepancy and adequacy of compensatory measures.

2. Assists facility management, as necessary, with work-priority designations to ensure that the most severe discrepancies are corrected first.

3. Categorizes each fire barrier discrepancy for tracking purposes and informs facility management of categorization and requirements for compensatory measures. Ensures that the discrepancy has a PER written.

3.1.4 Hanford Fire Department

1. Maintains a log of all discrepancies involving fire suppression or alarm systems.

2. Enters information, as necessary, concerning emergency response requirements for emergency impairments into the Fire Department computer-aided dispatch system.

3. Maintains tracking systems that provide status of planned impairments, discrepancies, deactivations, and corrections of fire suppression and alarm systems.

4. Categorizes each fire suppression or alarm system discrepancy (i.e., emergency impairment or system restriction) for tracking purposes.

3.1.5 Facilities and Site Services

Ensures that lease agreements specify the use of the requirements in this standard, or equivalent protection, where appropriate, for leased facilities.

3.2 Emergency Impairments

When possible, emergency impairments shall be repaired within 24 hours or less. If the system is not restored within 24 hours, facility management or supporting organization must submit a corrective action plan (work package) to the Hanford Fire Department and, within an additional 24 hours, notify the TFC fire protection engineer by e-mail, as a minimum. E-mail messages are kept by the Hanford Fire Department. Compensatory measures shall be used to reduce the

potential consequences of a fire. Compensatory measures in this standard or other action approved by the TFC fire protection engineer shall satisfy the intent of this requirement.

1. As soon as an emergency impairment is recognized, facility management must implement the applicable compensatory measures from this standard or otherwise obtain concurrence from the TFC fire protection engineer.

2. Measures will be initiated to satisfy the following requirements.

   a. Fire surveillance measures will be established throughout areas affected by emergency impairments. Fire surveillance does not provide an equivalent to a fire protection system. Use of fire surveillance measures in place of a fire protection system must be minimized.

   b. The need to terminate hazardous production or maintenance operations that were protected by the fire system (e.g., cutting, welding, and other hot work) will be evaluated. When systems protecting special hazards (such as sprinklers on coal conveyors) are out of service, the operation may need to be stopped.

   c. Determine the need for the Hanford Fire Department to stand by or for alternate water supplies.

   d. Maintain as much of the fire protection system in service as possible.

      NOTE: Often , sprinkler systems can be kept in service using temporary hose connections to hydrants or nearby sprinkler systems.

   e. Emergency vehicle access to affected facilities must not be obstructed.

3.3 Fire Surveillance

Fire watch requirements during hazardous operations such as cutting and welding are provided in TFC-ESHQ-FP-C-01.

Building managers are responsible for establishing a fire surveillance, and it is to be used as an interim compensatory measure when fire protection systems are inoperable (impaired). Compensatory measures are intended to reduce fire risk during the short period of time that the fire protection systems are impaired. Fire alarm panels locked in TROUBLE due to a malfunctioning supervisory condition/trouble condition shall be subject to surveillance requirements. Surveillance frequency shall be determined by the facility fire protection engineer using a graded approach.

NOTE: Compensatory measures are not equivalent to operable fire protection systems.

1. Notify occupants of the building that a fire protection system is out of service and the proper actions to take in an emergency.

3.4 Fire Surveillance Personnel

Fire surveillance personnel shall be informed of:

- The areas to be surveyed.
- Frequency of tours required.
- The specifics of the fire protection impairment.
- Appropriate emergency procedures and actions.
- Methods for sounding the alarm(s).
- Procedure for manually activating fire suppression systems
- Methods for recording pertinent information in the log.

3.5 Fire Surveillance Tour Frequencies Set by Nature of Impairment

1. Tours of affected areas shall be conducted by fire surveillance personnel. The frequency of those tours shall be in accordance with the following schedule:

    - Continuously, if required by facility process standards/controls.

    - Hourly, when fire protection systems are out of service, unless otherwise approved by the TFC fire protection engineer.

    - Occupied areas do not require fire surveillance.

2. Maintain a log, or equivalent documentation.

    - The Hanford Site Fire Surveillance Log (A-6001-431), or equivalent, shall be used to provide an auditable record of compliance with the requirements of this standard. (See TFC-PLN-13 for records retention requirements.)

3.6 System Restrictions

System restrictions shall be repaired within 15 business days. If it is determined that the responsible organization cannot repair a system restriction within 15 business days, facility management or supporting organization must submit a corrective action plan (work package) within 48 hours to the Hanford Fire Department and inform the fire protection engineer by e-mail, as a minimum. E-mail messages are kept by the Hanford Fire Department.

3.7 Deficiencies

Findings resulting from any fire protection appraisals or audits shall have a PER written for each item and be tracked until finished. If a fire protection finding cannot be readily resolved, the responsible manager must implement interim compensatory measures, if necessary, (in consultation with the TFC fire protection engineer) until the finding is satisfactorily dispositioned.

3.8 Facility Planned Impairments

Notify the Hanford Fire Department (373-2845 day shift or 373-2745 off-hours) at least 24 hours in advance of planned impairments.

When possible, only one planned impairment should be scheduled at a time in a given facility. It is understood that at times conditions may not support this and it may be necessary to have more than one impairment at a time. Compensatory measures shall be in place to mitigate the potential consequences of a fire and to minimize the length of the impairment.

3.9 Special Conditions

Systems that are impaired due to unexpected freeze conditions will be categorized as either system restrictions or emergency impairments, as appropriate. The condition of and repairs to the systems will be tracked through the work package associated with the repair. Systems that are removed from service on a preplanned basis to prevent freeze damage will be identified and tracked in the Hanford Fire Department database until returned to service.

Utility outages that impair fire protection systems shall be identified as a system restriction or emergency impairment, as appropriate. If more than one structure is affected by the outage, compensatory measures shall be applied in each affected structure, as necessary.

4.0 DEFINITIONS

Compensatory measures. An action taken to mitigate the potential consequences of a fire protection system discrepancy until the fire system is restored to service.

Continuous fire surveillance. Fire surveillance personnel who continuously occupy the affected area.

Corrective actions. Those actions taken to either repair or restore a fire system to service or to correct a design/installation deficiency. Repair and restoration are typically done using the work packages. Design/installation deficiencies frequently require design changes and/or project attention.

Corrective action plan. Usually the work package associated with the repair of the discrepancy.

Discrepancy.

a. Deficiency. A system design condition that does not prevent a fire protection system from operating as designed (not an impairment) but is characterized by a problem such as a code noncompliance, potential for failure, misapplication, inadequate coverage, or similar condition.

b. System restriction. A condition that restricts or otherwise impairs any fire protection system but does not preclude it from operating and/or transmitting a fire alarm.

c. Planned impairment. A planned outage that causes all or part of a fire protection system to become inoperable. This is usually for modification and/or correction of deficiencies.

d. Emergency impairment. Any unplanned condition that causes all or part of a fire protection system to be inoperable (i.e., unable to perform its intended function).

NOTE 1: A single device out of service in an area that has other devices of the same kind would not necessarily constitute an emergency impairment. For example, a single

smoke detector out of service in an open bay area that is covered by other functional smoke detectors may not be an emergency impairment. This decision is by agreement of the Safety organization fire protection engineer and the Hanford Fire Department.

NOTE 2: Regularly scheduled fire protection system testing/preventive maintenance activities do not constitute a discrepancy if the activity is conducted using approved procedures.

Fire protection system. A fire suppression system, fire alarm system, or fire barrier installed to prevent or mitigate fire damage or threat to life.

Fire surveillance. In the context of this standard, a fire surveillance is performed by a person assigned to survey the area(s) affected by an impairment for the purpose of identifying fires and initiating emergency action (e.g., notify fire department, sound building alarm, notify building occupants to evacuate).

Hourly fire surveillance. The affected area shall be toured and inspected at least once per hour by the assigned fire surveillance personnel.

Occupied area. An area where personnel normally report and remain during a designated work shift, and the area is not normally left unoccupied during the shift for longer than one hour. In addition, there are no physical barriers (e.g., walls) between the individual and the area with the impairment.

Support organization. TFC fire protection engineer, Fire Systems Maintenance, or Hanford Fire Department support facility management in maintaining the operation of facility fire protection systems.

5.0 SOURCES

5.1 Requirements

1. DOE O 420.1A, “Facility Safety.” (S/RID)

2. ORP M 420.1-1, “ORP Fire Protection Program.” (S/RID).

5.2 References

1. TFC-ESHQ-FP-C-01, “Controls for Safe Hotwork.”

2. TFC-ESHQ-Q_C-C-01, “Problem Evaluation Request.”

3. TFC-PLN-13, “Fire Protection Program.”